WHAT IS CLAIMED IS:

1. A method of registering an identification of a tire air pressure sensor device in a tire air pressure monitoring unit in a vehicle, in which the tire air pressure sensor device is provided for a tire of the vehicle and communicable with the tire air pressure monitoring unit, said method comprising:

setting an identification registration condition to the tire air pressure monitoring unit, said identification registration condition allowing the tire air pressure monitoring unit to register the identification of the tire air pressure sensor device when an unlikely signal is received, said unlikely signal being unlikely to be transmitted under normal circumstances;

transmitting the unlikely signal from the tire air pressure sensor device;

receiving the unlikely signal by the tire air pressure monitoring unit; and

firstly registering, by the tire air pressure monitoring unit, the identification of the tire air pressure sensor device according to the identification registration condition in response to the receive of the unlikely signal.

2. The method according to claim 1, wherein said unlikely signal includes a predetermined air pressure in the tire detected by the tire air pressure sensor device, said predetermined air pressure is unlikely to be detected by the air pressure sensor device under normal circumstances, and said identification registration condition includes a case where the tire

air pressure monitoring unit receives the unlikely signal.

3. The method according to claim 1, wherein said unlikely signal includes an unlikely change of the air pressure in the tire detected by the tire air pressure sensor device, said unlikely change of the air pressure is unlikely to be detected by the air pressure sensor device under normal circumstances, and said identification registration condition includes a case where the tire air pressure monitoring unit receives the unlikely signal including the unlikely change of the air pressure.

4. The method according to claim 1, wherein said unlikely signal includes a predetermined unlikely pressure generated by the tire air pressure sensor device, said predetermined unlikely pressure is unlikely to be detected by the air pressure sensor device under normal circumstances, and said identification registration condition includes a case where the tire air pressure monitoring unit receives the unlikely signal including the predetermined unlikely pressure.

5. The method according to claim 1, wherein said unlikely signal comprises pulse signals at unlikely intervals, said pulse signals at the unlikely intervals are unlikely to be transmitted from the tire air pressure sensor device under normal circumstances, and said identification registration condition includes a case where the tire air pressure monitoring unit receives the pulse signals at unlikely intervals.

6. The method according to claim 2, further comprising:

controlling the air pressure in the tire to supply/release air to/from the tire,

wherein said detected air pressure in the tire detected by the tire air pressure sensor device corresponds to the controlled air pressure therein, and said controlled air pressure is unlikely to be detected by the air pressure sensor device under normal circumstances.

7. The method according to claim 6, wherein said controlled air pressure represents an air pressure of the tire which is no more than an atmosphere pressure.

8. The method according to claim 7, wherein said tire comprises a predetermined number of tires, said tire air pressure sensor device comprises a predetermined number of tire air pressure sensor devices corresponding to the predetermined number of tires so that said tire air pressure sensor devices are provided for the tires, respectively, said tire air pressure sensor devices have the identifications, respectively, and

said identification registration condition allowing the tire air pressure monitoring unit to register the identification of the tire air pressure sensor device when the air pressures of all of the tires which are no more than the atmosphere pressure, respectively, are received.

9. The method according to claim 3, further comprising:

controlling the air pressure in the tire to supply/release air to/from the tire,

wherein said unlikely change of the air pressure in the tire is

happened by the control of the air pressure therein.

10. The method according to claim 9, wherein said air pressure in the tire changes to a first air pressure which is no more than an atmosphere pressure and to a second air pressure which is larger than the atmosphere pressure.

11. The method according to claim 4, further comprising:

providing externally a signal to the tire air pressure sensor device, and

wherein said unlikely pressure is generated by the tire air pressure sensor device as a dummy pressure in the tire according to the provided signal.

12. The method according to claim 11, wherein said generated unlikely pressure as the dummy pressure represents a vacuum pressure.

13. The method according to claim 1, wherein said unlikely signal and the identification of the tire air pressure sensor device are transmitted with each other as transmission information, said receiving step receives the transmission information by the tire air pressure monitoring unit and said firstly registering step further comprises:

firstly determining whether the transmission information is unlikely to be transmitted under normal circumstances; and

secondly registering the identification included in the transmission information signal in the tire air pressure monitoring unit as a check

identification when determining that the transmission information is unlikely to be transmitted under normal circumstances by the firstly determining step.

14. The method according to claim 13, further comprising:

secondly determining, by the tire air pressure monitoring unit, whether the check identification is registered therein;

thirdly determining, by the tire air pressure monitoring unit, whether the identification included in the transmission information signal checks out with the registered check identification when the secondly determining step determines that the check identification is registered in the tire air pressure monitoring unit;

fourthly determining, by the tire air pressure monitoring unit, whether the air pressure in the tire included in the transmission information signal is abnormal in a case where the thirdly determining step determines that the identification included in the transmission information signal checks out with the registered check identification; and

indicating an alert when the fourthly determining step determines that the air pressure in the tire included in the transmission information signal is abnormal,

wherein said firstly determining step determines whether the transmission information is unlikely to be transmitted under normal circumstances in a case where the secondly determining step determines that the check identification is not registered in the tire air pressure monitoring, or the thirdly determining step determines that the identification included in the transmission information signal does not

check out with the registered check identification.

15. The method according to claim 14, wherein said tire comprises a predetermined number of tires, said tire air pressure sensor device comprises a predetermined number of tire air pressure sensor devices corresponding to the predetermined number of tires so that said tire air pressure sensor devices are provided for the tires, respectively, said tire air pressure sensor devices have the identifications, respectively, said firstly determining step further comprises:

fifthly determining whether the transmission information includes the unlikely signal;

tentatively registering the identification included in the transmission information in the tire air monitoring unit;

sixthly determining whether a predetermined time elapses from starting the tentatively registration in the tentatively registering step; and

seventhly determining whether a number of identifications which are tentatively registered by the tentatively registering step equals to the predetermined number of tires when determining that the predetermined time does not elapse from starting the tentatively registration by the sixthly determining step,

and wherein said secondly registering step registers the tentatively registered identifications when determining that the number of identifications which are tentatively registered by the tentatively registering step equals to the predetermined number of tires.

16. A system with a memory in a vehicle for registering an

identification of a tire air pressure sensor device in the memory, in which the tire air pressure sensor device is provided for a tire of the vehicle, said system comprising:

a receiving unit configured to receive an unlikely signal which is transmitted from the tire air pressure sensor device, said unlikely signal being unlikely to be transmitted therefrom under normal circumstances; and

a first registering unit configured to register the identification of the tire air pressure sensor device in the memory in response to the receiving of the unlikely signal.

17. The system according to claim 16, wherein said unlikely signal and the identification of the tire air pressure sensor device are transmitted with each other as transmission information, said receiving unit receives the transmission information and said first registering unit further comprises:

a first determining unit configured to determine whether the transmission information is unlikely to be transmitted under normal circumstances; and

a second registering unit configured to register the identification included in the transmission information signal in the memory as a check identification when determining that the transmission information is unlikely to be transmitted under normal circumstances by the first determining unit.

18. The system according to claim 17, wherein said unlikely signal

includes a predetermined air pressure in the tire detected by the tire air pressure sensor device, said predetermined air pressure is unlikely to be detected by the air pressure sensor device under normal circumstances, and said first determining unit determines that the transmission information is unlikely to be transmitted under normal circumstances when the received unlikely signal includes the predetermined air pressure.

19. The system according to claim 17, wherein said unlikely signal includes an unlikely change of the air pressure in the tire detected by the tire air pressure sensor device, said unlikely change of the air pressure is unlikely to be detected by the air pressure sensor device under normal circumstances, and said first determining unit determines that the transmission information is unlikely to be transmitted under normal circumstances when the received unlikely signal the unlikely change of the air pressure.

20. The system according to claim 17, wherein said unlikely signal includes a predetermined unlikely pressure generated by the tire air pressure sensor device, said predetermined unlikely pressure is unlikely to be detected by the air pressure sensor device under normal circumstances, and said first determining unit determines that the transmission information is unlikely to be transmitted under normal circumstances when the received unlikely signal includes the predetermined unlikely pressure.

21. The system according to claim 17, wherein said unlikely signal

comprises pulse signals at unlikely intervals, said pulse signals at the unlikely intervals are unlikely to be transmitted from the tire air pressure sensor device under normal circumstances, and said first determining unit determines that the transmission information is unlikely to be transmitted under normal circumstances when the received unlikely signal comprises the pulse signals at unlikely intervals.

22. The system according to claim 17, further comprising:

a second determining unit configured to determine whether the check identification is registered in the memory;

a third determining unit configured to determine whether the identification included in the transmission information signal checks out with the registered check identification when the second determining unit determines that the check identification is registered in the memory;

a fourth determining unit configured to determine whether the air pressure in the tire included in the transmission information signal is abnormal in a case where the third determining unit determines that the identification included in the transmission information signal checks out with the registered check identification; and

an indicating unit configured to indicate an alert when the fourth determining unit determines that the air pressure in the tire included in the transmission information signal is abnormal,

wherein said first determining unit is configured to determine whether the transmission information is unlikely to be transmitted under normal circumstances in a case where the second determining unit determines that the check identification is not registered in the memory, or

the third determining unit determines that the identification included in the transmission information signal does not check out with the registered check identification.

23. The system according to claim 22, wherein said tire comprises a predetermined number of tires, said tire air pressure sensor device comprises plural corresponding to the predetermined number of tires so that said tire air pressure sensor devices are provided for the tires, respectively, said tire air pressure sensor devices have the identifications, respectively, said first determining unit further comprises:

a fifth determining unit configured to determine whether the transmission information includes the unlikely signal;

a tentatively registering unit configured to tentatively register the identification included in the transmission information in the memory;

a sixth determining unit configured to determine whether a predetermined time elapses from starting the tentatively registration in the tentatively registering unit; and

a seventh determining unit configured to determine whether a number of identifications which are tentatively registered in the memory equals to the predetermined number of tires when the sixth determining unit determines that the predetermined time does not elapse from starting the tentatively registration,

and wherein said second registering unit registers the tentatively registered identifications when determining that the number of identifications which are tentatively registered in the memory equals to the predetermined number of tires.

24. A tire air pressure sensor device provided for a tire of a vehicle, said tire air pressure sensor device comprising:

an air pressure sensor configured to detect an air pressure in the tire;

a memory in which an identification of the tire air pressure sensor device is stored;

a transmitting unit configured to transmit a transmission signal, said transmission signal including the air pressure detected by the air pressure sensor and the identification;

a receiving unit configured to receive a trigger signal transmitted from an exterior of the tire air pressure sensor device; and

a determining unit configured to determine whether the receiving unit receives the trigger signal,

wherein said transmitting unit is configured to transmit an unlikely signal when the determining unit determines that the receiving unit receives the trigger signal, said unlikely signal being unlikely to be transmitted from the transmitting unit under normal circumstances.

25. The tire air pressure sensor device according to claim 24, wherein said transmitting unit is configured to transmit an unlikely pressure as the unlikely signal when the determining unit determines that the receiving unit receives the trigger signal, said unlikely pressure being unlikely to be detected by the air pressure sensor under normal circumstances.

26. The tire air pressure sensor device according to claim 24, wherein said transmitting unit is configured to transmit pulse signals at unlikely intervals as the unlikely signal when the determining unit determines that the receiving unit receives the trigger signal, said pulse signals at the unlikely intervals are unlikely to be transmitted from the tire air pressure sensor under normal circumstances.

27. A program product readable by a computer, in which the computer is installed in a vehicle and is communicable with a tire air pressure sensor device, and the tire air pressure sensor device is provided for a tire of the vehicle, said program product comprising:

first means for causing the computer to receive an unlikely signal which is transmitted from the tire air pressure sensor device, said unlikely signal being unlikely to be transmitted therefrom under normal circumstances; and

second means for causing the computer to register the identification of the tire air pressure sensor device in a memory in response to the receiving of the unlikely signal.

28. The program product according to claim 27, wherein said unlikely signal and the identification of the tire air pressure sensor device are transmitted with each other as transmission information, said receiving means receives the transmission information and said first means further comprises:

third means for causing the computer to determine whether the transmission information is unlikely to be transmitted under normal

circumstances; and

fourth means for causing the computer to register the identification included in the transmission information signal in the memory as a check identification when determining that the transmission information is unlikely to be transmitted under normal .

29. The program product according to claim 28, further comprising:

fifth means for causing the computer to determine whether the check identification is registered in the memory;

sixth means for causing the computer to determine whether the identification included in the transmission information signal checks out with the registered check identification when determining that the check identification is registered in the memory;

seventh means for causing the computer to determine whether the air pressure in the tire included in the transmission information signal is abnormal in a case of determining that the identification included in the transmission information signal checks out with the registered check identification; and

eighth means for causing the computer to set a data allowing an indication unit to indicate an alert when determining that the air pressure in the tire included in the transmission information signal is abnormal,

wherein said computer in the third means determines whether the transmission information is unlikely to be transmitted under normal circumstances in a case where the computer in the fifth means determines that the check identification is not registered in the memory, or the

computer in sixth means determines that the identification included in the transmission information signal does not check out with the registered check identification.

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